Part I: Report Summary

In 2002-04, Wisconsin progressed in its development of a comprehensive framework to reduce and manage nonpoint sources of pollution through statewide performance standards for this, the largest source of conventional pollutants to our waters. In addition, significant policy initiatives designed to better protect groundwater and sensitive surface waters, such as outstanding resource waters, and to better address the special needs of the Great Lakes ecosystem have been sponsored by the Governor. New groundwater legislation will help protect sensitive resources from excessive consumptive use, while renewed emphasis on the Great Lakes will focus talent and resources on this, one of our most-beloved ecological treasures.

Additionally, Wisconsin is improving its tracking of water quality condition through data management system upgrades for assessment, permitting and compliance. We are also implementing electronic discharge monitoring report submittals and web-based permit applications. These changes take advantage of new technology, making data more available to decision makers and the public. Enhancements incorporate spatial views, or maps, so that waterbodies and descriptive data can be viewed and edited interactively. This technology makes data available for integrated analyses and for "point-and-click" readability at the waterbody level to improve management and public access.

Using new tools that improve the accuracy of waterbody size calculations, we have found a significant difference in the total mileage historically reported for 305b purposes. The state's 1:24 hydrography layer shows that our state supports 84,474 stream miles, 1.2 million lake acres and 1,000 Great Lakes shoreline miles. In 2005-06, assessment data will better match these summary figures (ie., the 1:24,000 scale hydrography layer will be used to calculate individual waterbody size), thereby changing our state's assessment calculations. However, in this report we are resubmitting 2002 assessment figures, described below.

As of the 2002 reporting period, 24,422 stream miles (28% of total based on 84,474 mi) were "assessed" — 9,199 miles had been monitored (11%) and 15,222 miles were evaluated (18%) — all 57,698 stream miles are listed as impaired for one or more beneficial uses due to a statewide general fish consumption advisory for mercury. These data reflect cumulative work over a period of several years. In addition, direct habitat alterations negatively affect 8,459 stream miles; siltation or sedimentation affect 6,458 stream miles; and nutrients affect 2,717 stream miles. Following these key causes are turbid waters, low dissolved oxygen and the presence of pathogens (bacteria).

Sources of problems include atmospheric deposition (57,698 miles), agriculture (5,620 miles), hydrologic modifications (4,223 miles), non-hydrologic habitat modifications (3,583 miles), and streambank pasturing (2,736 miles). These stream figures reflect historic data (gathered prior to 2000-02) as well as assessments made in 2002.

Wisconsin lakes have been more comprehensively evaluated than streams, in large part due to outstanding Lake Monitoring Volunteers. Over 792,000 lake acres have been assessed, with 758,782 acres monitored and 33,519 acres evaluated. As with rivers, due to the presence of a general fish consumption advisory for mercury, all 792,000 lake acres are listed as impaired for one or more designated uses, with mercury via atmospheric deposition the chief cause/ stressor. Other problems include excess nutrients, siltation, organic enrichment, noxious aquatic plants, and the presence of aquatic invasive species. Key source categories include agriculture, construction, hydrologic modifications (dam construction and flow changes), and habitat modification or destruction.

Wisconsin plans to achieve comprehensive coverage of its waters through continuing to implement baseline monitoring utilizing random stratified sampling techniques and improve the tracking and assessment of all waterbodies. In addition, the state's growing Volunteer Rivers Program will help provide "red flag" data to biologists, which will help focus valuable resources. These improvements, combined with substantial improvements in data management systems, will allow Wisconsin to better understand and communicate general trends or changes in water quality over time.

Issues of special concern include nonpoint source standards implementation, Great Lakes management, aquatic invasive species, water quantity, riparian development, habitat protection and restoration, atmospheric deposition of mercury, monitoring and data management, and compliance assistance.